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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,618	03/18/2004	Yuichi Taguchi	16869B-102700US	7877

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EXAMINER
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MAHMOOD, REZWANUL

ART UNIT	PAPER NUMBER
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2164

MAIL DATE	DELIVERY MODE
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07/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/804,618

Applicant(s)

TAGUCHI, YUICHI

Examiner

Rezwanul Mahmood

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br/>Paper No(s)/Mail Date _____</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)<br/>Paper No(s)/Mail Date. _____</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____</p> |
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### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/15/2007 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aguren (US Publication 2005/0065961) in view of Liang (US Publication 2005/0044162).

4. With respect to claim 1, Aguren discloses a storage system, comprising:  
a host configured to receive a data file from a client, the host including a data management rule set program that is operable to associate data management rule information to the data file received from the client and determine how to protect and relocate the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9;

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Paragraph 21, lines 1-17; paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5, a first storage subsystem configured to receive and store the data file from the host, the storage system including a storage controller and a plurality of storage volumes (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5),

Aguren does not explicitly disclose wherein the data management rule information is stored in a header of the data file.

The Liang reference, however, discloses storing rule information in a header of a data file (Liang: Paragraph 37, lines 1-7; Figure 5).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Aguren with the teachings of Liang to store data management rule information in a header of a file for sharing data storage objects between clients and servers and to access a storage object in a file server (Liang: Paragraph 2, lines 4-5; Paragraph 6, line 2)

a data protection server including a data protection management program that cooperates with the first storage subsystem to protect the data file stored in the first storage subsystem in accordance with the data management rule information, the data protection server looking up the data management rule information in the header of the data file to determine action to protect the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5); and

a data relocation server that controls relocation of the data file from the first

storage subsystem to another storage subsystem (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

5. With respect to claim 3, Aguren in view of Liang discloses the storage system of claim 1, wherein the data management rule information relates to a retention period of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

6. With respect to claim 4, Aguren in view of Liang discloses the storage system of claim 1, wherein the first storage subsystem further comprises a data protection program that cooperates with the data protection management program of the data protection server to protect the data file stored in the first storage subsystem, wherein the data management rule information is attached to the data file and transmitted to the first storage subsystem with a data content of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

7. With respect to claim 5, Aguren in view of Liang discloses the storage system of claim 1, wherein the data relocation server includes a data relocation management program and a storage information table including information about storage

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subsystems and storage media associated with the storage system, wherein the data relocation management program initiates the relocation of the data file to a second storage volume to which the data file will be relocated by looking up the storage information table for a suitable storage location for the second storage volume (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

8. With respect to claim 6, Aguren in view of Liang discloses the storage system of claim 5, wherein the second storage volume is located in a second storage subsystem of the storage system (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

9. With respect to claim 7, Aguren in view of Liang discloses the storage system of claim 1, wherein the data relocation server and the host are different devices (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

10. With respect to claim 8, Aguren in view of Liang discloses the storage system of claim 1, wherein the data protection server and the host are different devices (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

11. With respect to claim 9, Aguren in view of Liang discloses the storage system of claim 1, wherein the data management rule set program of the host inserts a plurality of management rules into the header of a data file, the management rules relating to information about a retention period and relocation instructions of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5).

12. With respect to claim 10, Aguren in view of Liang discloses a management server provided in a storage system, the storage system including one or more hosts and one or more storage subsystems (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5), the management server comprising:

- a memory to store data (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5);

- a processor to process data (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5);

- a network interface to link with one or more computers of the storage system, and data file to be stored in a storage subsystem of the storage system, the data management rule information relation to a retention period and to relocation information of the data file (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5),

- wherein the data file and the data management rule information are stored in a storage volume of the storage subsystem (Aguren: paragraph 4, lines 1-9; Paragraph

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16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5);

wherein the data management rule information is inserted into a header of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5); and

wherein the management server includes a second management program that cooperates with a file system to store the data file in the storage subsystem, the second management program looking up the data management rule information inserted into the header of the data file to determine action to take with respect to the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

13. With respect to claim 11, Aguren in view of Liang discloses the server of claim 10, wherein the server is a host that is configured to receive data files from a client of the storage system and send read and write requests to the storage subsystem (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

14. With respect to claim 12, Aguren in view of Liang discloses the server of claim



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10, wherein the second management program is a data protection management program or a data relocation management program (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7).

15. With respect to claim 13, Aguren in view of Liang discloses a management server provided in a storage system, the storage system including one or more hosts and one or more storage subsystems, the management server comprising:

- a memory to store data (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5);

- a processor to process data (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5);

- a network interface to link with one or more computers of the storage system (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5); and

- a first management program operable to access a header of a data file to look up data management rule information inserted in the header and manage the data file according to the data management rule information inserted in the header, the data management rule information relating to a retention period and to relocation instructions of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

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16. With respect to claim 14, Aguren in view of Liang discloses the server of claim 13, wherein the server is a data protection server and the first management program is a data protection management program (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

17. With respect to claim 15, Aguren in view of Liang discloses the server of claim 13, wherein the server is a data relocation server and the first management program is a data relocation management program (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

18. With respect to claim 16, Aguren in view of Liang discloses a method for managing a data file stored in a storage system, the storage system including one or more client, one or more hosts, one or more storage subsystems (Aguren: Paragraph 15, lines 1-13; Paragraph 16, lines 1-9; Figures 1-5), the method comprising:

receiving a data file including a header and a data content (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5);

attaching data management rule information to the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-

14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5);

storing the data file and the data management rule information at a first storage location in a first storage subsystem, the data management rule information relating to retention and to relocation information of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7);

notifying a management program about the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5);

accessing the data management rule information attached to the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5); and

performing a management act relating to the data file according to the data management rule information (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5),

wherein the data management rule information is inserted into a header of the data file (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure

5; Liang: paragraph 37, lines 1-7; Figure 5).

19. With respect to claim 18, Aguren in view of Liang discloses the method of claim 16, wherein the data management rule information is accessed by a data protection management program provided in a data protection server, the management act being an act related to preventing the data file stored in the first storage location from being modified or deleted (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

20. With respect to claim 19, Aguren in view of Liang discloses the method of claim 16, wherein the data management rule information is accessed by a data relocation server, and the management act relates to relocating the data file to a second storage location (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

21. With respect to claim 20, Aguren in view of Liang discloses the method of claim 16, wherein the data management rule information is inserted into the header of the data file by a host (Aguren: paragraph 4, lines 1-9; Paragraph 16, lines 1-9; Paragraph 21, lines 1-17; Paragraph 43, lines 1-14; Paragraph 52, lines 1-20; Paragraph 92, lines 1-8; Figure 5; Liang: paragraph 37, lines 1-7; Figure 5).

***Remarks***

22. Applicant's arguments with respect to claims 1, 3-16 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Greenblatt reference (US Publication 2003/0115204) teaches about data management server and storage systems. The Gajjar reference (US Publication 2002/0174306) teaches about policy based storage management. The Umebayashi reference (US Publication 2004/0010701) teaches about a data protection program. The Trimmer reference (US Publication 2004/0044863) teaches about a data protection program. The Prahlad reference (US Publication 2006/0010154) teaches about a system and method performing storage operations using network attached storages. The Boraz reference (US Publication 2006/0288183) teaches about a data protection server and program. The Thomlinson reference (US Patent 6,389,535) teaches about data protection server and program. The Arnold reference (US Publication 2004/0199782) teaches about privacy enhanced storage. The Bridge reference (US Patent 6,530,035) teaches about managing storage systems containing redundancy data.

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**Contact Information**


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rezwanul Mahmood whose telephone number is (571)272-5625. The examiner can normally be reached on M - F 10 A.M. - 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571)272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

July 21, 2007

  
SHAHID ALAM  
PRIMARY EXAMINER

  
Rezwanul Mahmood  
Examiner  
Art Unit 2164